

HENNEPIN COUNTY MINNESOTA



Recycling Progress Report

Adjusting to a new normal and building zero waste habits

June 2022



VISIT...

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Introduction

The Recycling Progress Report provides an update on implementation of Hennepin County's Solid Waste Management Master Plan, progress toward waste diversion goals, and a summary of the 2021 results for the county's waste management programs.

State statute requires metropolitan counties to prepare master plans every six years that identify strategies to meet the recycling goals and objectives in the state's Metropolitan Solid Waste Management Policy Plan. The policy plan was adopted by the Commissioner of the Minnesota Pollution Control Agency (MPCA) on April 6, 2017, establishing the framework for managing solid waste in the metro area through 2036.

The policy plan sets objectives for each waste management method, with an emphasis on the upper end of the waste management hierarchy in order to achieve the legislative goals for recycling and organics recovery. Minnesota State Statute 115A.551 establishes a 75% recycling rate goal by 2030.

Hennepin County developed its 2018 Solid Waste Management Master Plan to make progress toward the goal of recycling 75% of waste by 2030. The master plan demonstrates the county's commitment to conserving natural resources, protecting the environment, and ensuring public health and safety.

The county's master plan was developed to be consistent with the Hennepin County Board of Commissioner's mission "to enhance the health, safety and quality of life of our residents and communities in a respectful, efficient and fiscally responsible way." It is also consistent with the Hennepin County Environment and Energy Department's mission of "protecting the environment and conserving resources for future generations" and overarching strategic goal that "Hennepin County's environment is preserved for future generations." Learn more about the master plan at hennepin.us/solidwasteplanning.

Waste prevention and reuse

Don't create waste in the first place

Recycle

Turn the material in to a new product

Compost

Recycle organic material into compost

Waste-to-energy

Burn waste to produce electricity and steam to power our homes

Landfill

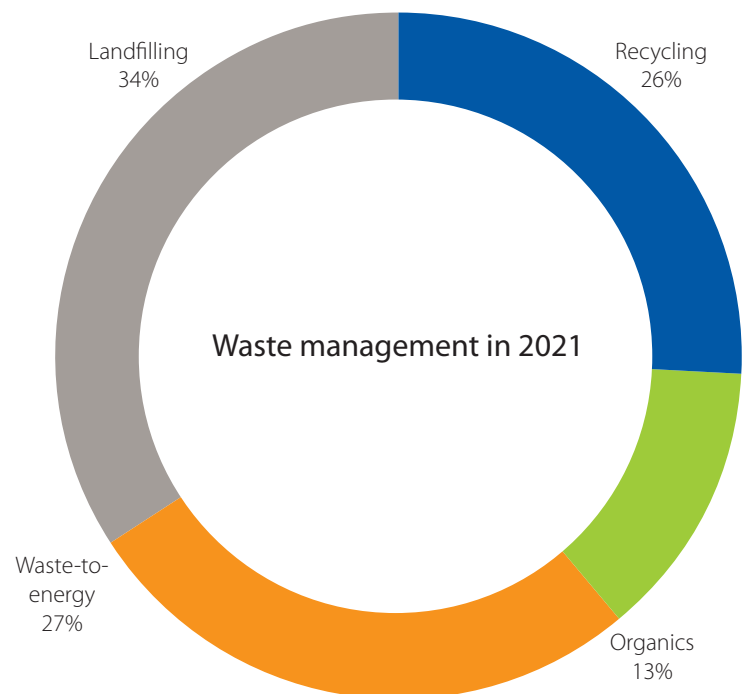
Bury waste

Progress toward goals

Minnesota statute requires metro counties achieve a 75% recycling rate by 2030. Although we've made incremental progress toward that goal, we have a long way to go.

About 1.3 million tons of solid waste, which includes recycling, organics, and trash, were generated in Hennepin County in 2021. That is a 5% increase from 2020, or about 64,500 tons more.

Of the total tons generated, 39% was managed as recycling and organics. The remaining 61% was managed as trash at a waste-to-energy facility or landfill.



Changes in waste management

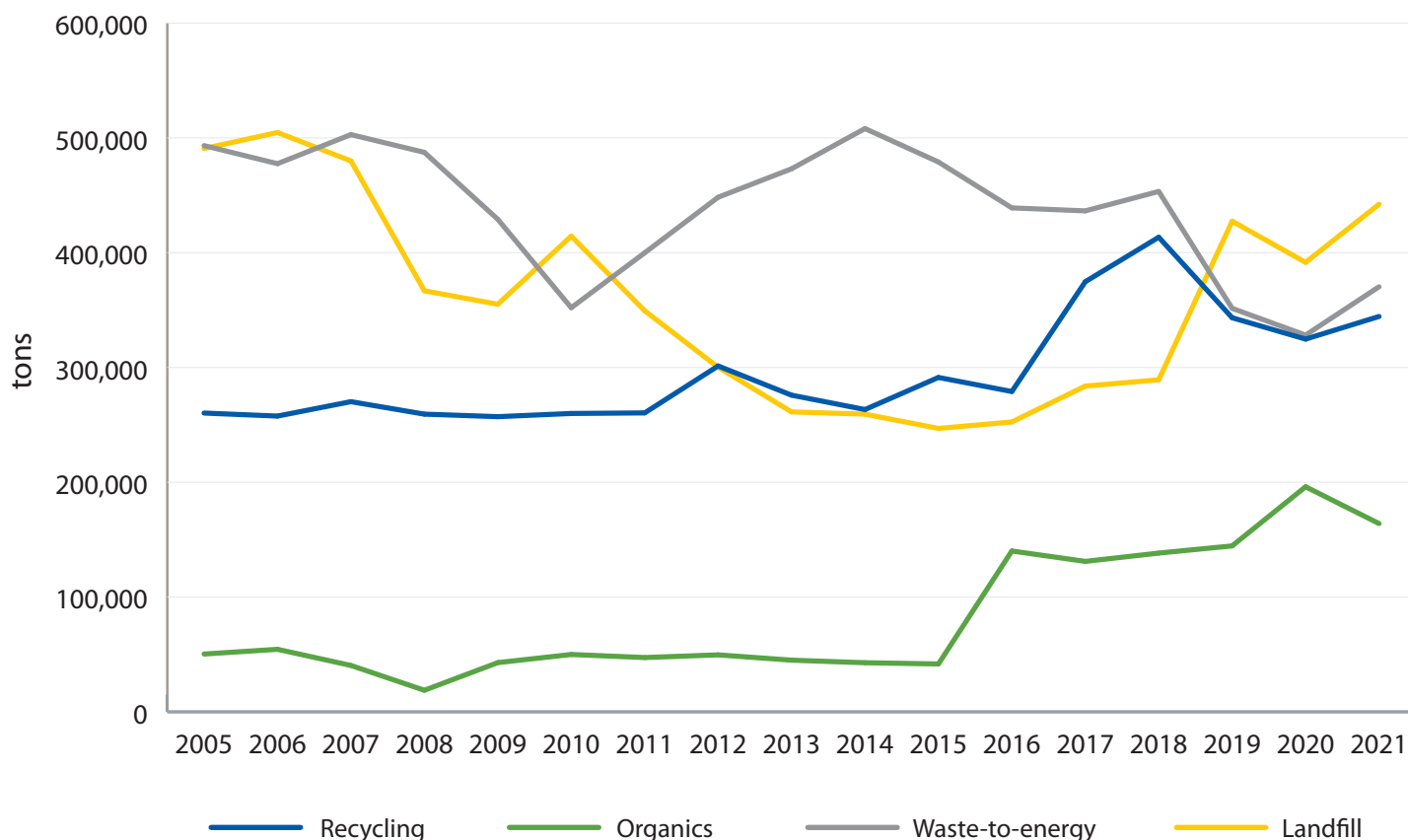
The amount of waste diverted to recycling in 2021 increased by 10% compared to 2020. Despite this increase, the overall recycling rate decreased from 42% in 2020 to 39% in 2021. Gains in recycling were offset by a decrease in organics recovery and an increase in trash generation. The decrease in organics was driven primarily by a decrease in yard waste, which was down more than 34,000 tons compared to the previous year. The increase in trash was likely due to changing consumer trends as more people resumed regular pre-pandemic activities.

Changes in waste management methods, 2020 to 2021

Management method	2020 (tons)	2021 (tons)	Percent change
Recycling	324,716	344,419	10%
Organics (includes yard waste)	196,088	164,032	-16%
Resource recovery	328,210	354,436	9%
Landfill	391,562	442,187	13%
Total	1,240,576	1,305,047	5%

Over the past 15 years, the most noticeable trend is the increase in organics. This increase was driven by several factors – commercial organics collection expanded, cities rolled out new curbside organics programs, and the Minnesota Pollution Control Agency allowed yard waste to be included in the organics numbers. More recently, there was a sharp increase in landfilling and decrease in waste-to-energy. In 2019, landfilling increased to almost 30% because the Great River Energy Elk River Resource Recovery Project closed in January 2019. Instead of being processed to recover metals and energy, that trash was landfilled. Recycling has been steady or increased incrementally over the years, with the exception of a higher tonnages reported in 2017 and 2018.

Changes in waste management, 2005 to 2021



A note on reporting methodology

The complexity of the solid waste system makes it difficult to measure how waste is managed. Collecting recycling data from the commercial sector is particularly challenging. Our reporting methodology continues to evolve to address shortcomings in the reporting system, including underreporting, quality control, and compliance with Minnesota Pollution Control Agency requirements.

Developing the next master plan

The MPCA began drafting changes to the Metropolitan Solid Waste Management Policy Plan in 2021. This kicks off the next planning cycle for counties to update their solid waste management master plans.

Next steps in the planning process

- Summer 2022: MPCA releases draft policy plan
- November 2022: Draft Hennepin County Zero Waste Plan presented at county board briefing
- Winter 2022: MPCA approves the final policy plan
- 2023: County develops and adopts its master plan

Adjusting to a new normal

Hennepin County continued a thoughtful and intentional transition to a new normal in 2021. The county resumed many vital services, continued to learn what programming can have greater reach and access by being offered remotely and online, and made progress on many priority initiatives.

Resuming vital services

Throughout 2021, we resumed important services that were scaled back in 2020.

After a year of limited operations to follow COVID-19 health and safety guidelines, many of our hazardous waste and drop-off recycling services resumed normal operations. The Hennepin County drop-off facilities in Bloomington and Brooklyn Park once again accepted large items like appliances and TVs for recycling, residents once again had access to more than 50 medicine drop boxes, and we held six household hazardous waste collection events.

We also helped partners improve their recycling programs and educate their community by reopening order forms for environmental education, residential recycling, school recycling, business recycling, and multifamily recycling resources and making our environmental education kits available for reservation.



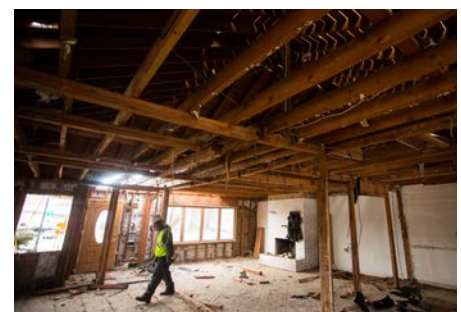
Making progress on priority initiatives

As we adjusted to a new normal in 2021, we continued to make progress on priority initiatives. These include committing to bold action on climate change and zero waste, providing funding and support to meet community needs and target priority actions and materials, increasing access to organics recycling, and reaching our communities in new ways. Below are some of the initiatives we made progress on in 2021. Find more details about these in the Progress on Master Plan Strategies section starting on page 15.



- Committed to bold action on climate change by setting a goal to achieve net zero greenhouse gas emissions by 2050 and adopting the county's Climate Action Plan. The plan includes strategies to better understand the climate impacts of consumer choices and reduce greenhouse gas emissions associated with waste and material use.

- Started the development of a Zero Waste Plan and laid the groundwork for a broad community engagement process that has a strong focus on equity and disparity reduction.
- Updated the Residential Waste Reduction and Recycling Funding Policy, which guides how the county allocates funding to support city waste reduction and recycling programs. The updated policy prioritizes support for organics recycling programs and focuses on reducing disparities and increasing access to recycling and organics recycling programs.
- Joined the U.S. Plastics Pact to build on county efforts to support residents and businesses who want to take action on plastic waste and pollution.
- Launched a new grant program to increase waste prevention at businesses.
- Encouraged the salvage and reuse of building materials through deconstruction grants and helped support the work of building material reuse organizations.
- Increased access to organics recycling by working with cities to expand organics recycling options for residents and advanced efforts to develop organics recycling infrastructure by releasing an request for proposals for an anaerobic digestion facility adjacent to the county's Brooklyn Park Transfer Station.
- Continued to engage residents virtually to reduce waste, recycle more, and be a leader in their communities. We held our first online Plastic-Free Challenge, held a second online Stop Food Waste Challenge, and continued to provide individualized support to households through the Zero Waste Challenge. We trained a new cohort of Master Recycler/Composter volunteers through an online course and offered virtual backyard composting webinars.
- Supported our partners and expanded our reach through recycling and environmental education grants and engaged our environmental education network by hosting virtual network meetings, providing free resources, and launching an environmental education network Facebook group.



Mapping a zero waste future

Hennepin County began the development of a Zero Waste Plan in 2021. This process kicked off following a board resolution passed in August 2021 directing staff to develop an operational plan to map Hennepin County to a zero-waste future. The board specified that plan development include a broad community engagement process with a strong focus on equity and disparity reduction.

The Zero Waste Plan will complement the county's newly adopted Climate Action Plan and provide the foundation for the county's 2024 Solid Waste Management Master Plan.

Our vision for zero waste



Hennepin County's zero-waste vision is a waste management system where all materials are designed to become resources for others to use. The key performance measure is diverting 90% or more of all discarded materials from landfills and incinerators.

Achieving zero waste will require significant changes in the choices we all make in our day-to-day lives and transformative changes in the policies, programs and resources that make up the solid waste system. Through the plan development, the county is engaging the community to bring diverse perspectives and collective action to shape and drive this transformational change.

Our approach to plan development

Hennepin County selected several consultants and a cohort of community groups to work with county staff to get community feedback and help develop the plan.

A national solid waste consultant, Resource Recycling Systems (RRS), will identify gaps in the county's existing solid waste system, review the solid waste systems of leading zero-waste communities, conduct stakeholder engagement, and coordinate work groups to develop strategies.

A local facilitator, Antonia Apolinário-Wilcoxon, Ed.D. of Equity Strategies, will support the plan's broad community engagement process with a strong focus on equity and disparity reduction.

A cohort of community groups will receive funding to support community engagement for the Zero Waste Plan. These groups will provide input on engagement plans for their communities, host community conversations, and communicate updates to their community members on the process and feedback opportunities. These groups will also work together to gain a broader understanding of the solid waste system, develop community-identified solutions, and define themes for use in the subsequent plan development phase.

Developing the plan

The county will conduct community engagement and develop the plan in 2022. A draft of the Zero Waste Plan will be presented to the county board in November 2022.

Zero Waste Plan community engagement cohort

These 18 community groups will receive funding to support community engagement for the Zero Waste Plan. Their engagement will focus on centering the voices of communities of color, youth, and other residents who have traditionally been left out of solid waste planning processes.

- Action to Equity
- Audubon Neighborhood Association
- Center for Hmong Arts and Talent
- Climate Generation/Youth Environmental Activists of Minnesota (YEA! MN)
- Community Power with Minnesota EJ Table
- Congregations Caring for Creation
- Eastside Neighborhood Services
- Ebenezer Oromo Evangelical Church
- Encouraging Leaders
- Lao Assistance Center of Minnesota
- Little Earth Protectors
- McKinley Community
- MN Renewable Now
- Northside Residents Redevelopment Council
- Off The Blue Couch
- Somali American Women Action Center
- Resilient Cities and Communities with Inquilinx Unidxs por Justicia
- Thai Cultural Council of Minnesota



Achieving more through collaboration

Partnership on Waste and Energy

The Partnership on Waste and Energy (PWE) is a Joint Powers Agreement between the Ramsey/Washington Recycling & Energy Board and Hennepin County. The partnership collaborates in areas of waste and energy management, including legislation and policy development, communication and outreach, planning and evaluation of waste processing, and other selected programs.

Legislative advocacy efforts

Each year, the PWE governing board adopts a legislative platform. PWE board members and lobbyists engage legislators around platform topics and work in collaboration with partners toward common goals.

In the 2021 legislative session, PWE's lobbying activities included the following successes:

- Secured more funding for waste reduction and recycling, including a 4% increase in SCORE grants.
- Bolstered markets for biofuels from anaerobic digestion through the Natural Gas Innovation Act.
- Prevented the loss of St. Paul District Energy as a biomass energy solution for wood waste.
- Secured community grants and assistance to fight the impacts of the emerald ash borer.
- Prohibited PFAS chemicals in food packaging.

Product stewardship

Product stewardship is a policy approach that holds producers responsible for the management of their products and packaging for the materials' full life cycle to minimize the environmental and social impacts. PWE partners with the Minnesota Solid Waste Administrators Association (SWAA) Product Stewardship Committee to advance a shared vision of product stewardship across the state.

This includes:

- Supporting product stewardship efforts that reduce lifecycle impacts of products and packaging.
- Reducing financial burdens associated with waste disposal on local government and taxpayers.
- Establishing measurable and enforceable goals.

In 2021, PWE counties partnered with the Product Stewardship Institute to engage with multiple stakeholder groups to develop legislation on extended producer responsibility for packaging in Minnesota. The goal is to introduce a bill in the 2023 Minnesota Legislative Session with a coalition of support.

PWE also collaborates to advance policies related to other products like carpet, mattresses and electronics.

Anaerobic digestion

Diverting organics from the trash through anaerobic digestion, otherwise known as AD, is a strategy that would help PWE counties make progress toward zero waste and climate action goals.

Food and organic materials decomposing in landfills produce methane, a potent greenhouse gas. Climate experts rank anaerobic digestion as a top climate solution because the methane created and captured from the controlled process reduces greenhouse gas emissions and creates renewable natural gas, fertilizer and compost.

In 2021, both Hennepin County and Ramsey/Washington Recycling & Energy (R&E) advanced efforts to develop organics recycling infrastructure.

Hennepin County added an anaerobic digestion facility to its 2021 capital budget, requested \$21 million from the state's 2022 bonding bill, and released a request for proposals for an AD facility to process organic materials.

The shared interest in recovering the resource value of organic waste drove PWE collaboration in 2021. This included support for legislative initiatives, such as the Future Fuels Act and the Natural Gas Innovation Act (now passed into law) and ongoing partnerships with the Great Plains Institute, EcoEngineers, Coalition for Renewable Natural Gas, American Biogas Council, Minnesota Future Fuels Coalition and the Bioeconomy Coalition of Minnesota.

Be a Battery Hero campaign



Fires caused by batteries are a growing concern for waste and recycling facilities across the country, including those owned by PWE counties.

Through PWE, the counties launched a 2021 campaign to educate residents on proper battery disposal. Goals of the campaign were to increase the number of batteries brought to drop-off sites and reduce the number of batteries in the trash and recycling.

The campaign was shared widely by cities and residents in the three counties, and partners across the state and country asked PWE to share the campaign assets to educate their communities.

Hennepin County saw a significant increase in lithium batteries collected, which is notable because these batteries are the most hazardous in terms of fire risks.

Working to eliminate plastic waste with the U.S. Plastics Pact

Hennepin County joined the U.S. Plastics Pact in 2021 to build on county efforts to support residents and businesses who want to take action on plastic waste and pollution.

The U.S. Plastics Pact is unifying stakeholders across the entire plastics value chain – including plastic packaging producers, brands, retailers, waste management companies, nonprofit organizations, and government agencies – to rethink the way we design, use, and reuse plastics, ultimately reducing plastic waste in our environment and creating a circular economy for plastics.



Roadmap to 2025

In 2021, the U.S. Plastics Pact released their Roadmap to 2025, which outlines a national strategy for realizing a circular economy for plastics in America. The roadmap illustrates how the stakeholders will approach each of the four targets and includes plans to engage external stakeholders to deliver the targets.



The four targets are:

1. Define a list of packaging that is problematic or unnecessary by 2021 and take measures to eliminate them by 2025
2. Make 100% of plastic packaging reusable, recyclable, or compostable by 2025
3. Undertake ambitious actions to effectively recycle or compost 50% of plastic packaging by 2025
4. Achieve an average of 30% recycled content or responsibly sourced, biobased content by 2025

To make progress toward these goals, members agree to actively collaborate in work groups, grant-funded pilot projects, and research. They also share best practices and legislative expertise, engage with residents, and distribute news and information.

Progress on implementing master plan strategies

The Hennepin County Solid Waste Management Master Plan for 2018 to 2023 identifies strategies the county will pursue to reach the goals of recycling 75% of waste by 2030.

The master plan includes the following strategies to help meet our goals of increasing recycling, preventing waste, and minimizing waste sent to landfills:

- Focus on organics recycling by establishing requirements for cities and certain businesses, increasing local capacity to manage organics, and working to prevent food waste.
- Build momentum for waste prevention and reuse by better understanding consumption habits and promoting waste prevention actions.
- Engage residents through outreach and education by raising awareness about changes in recycling programs, generating excitement about recycling and waste reduction, motivating environmental actions, and empowering residents to become leaders in their communities.
- Continue to serve residents where they are, including at home, work, school, and on-the-go.
- Provide and expand drop-off disposal options for hazardous waste, problem materials, and additional recyclables.
- Recover resources from the trash.

The following section includes updates on our progress of implementing these master plan strategies.



Focus on organics

Organic materials – which includes food, food-soiled paper, and other compostable materials – make up 30% of our trash, so recycling them is key to achieving a 75% recycling rate and reducing the amount of waste we send to landfills. Diverting organics from the trash also helps address climate change by reducing emissions of greenhouse gases, especially methane, which is generated from the decomposition of organic materials in landfills.

Infrastructure development

The existing organics recycling infrastructure in the Twin Cities is strained, and additional capacity is needed to both ensure the viability of existing programs and support the development of new programs for residents and businesses.

2021 results

- Completed the design for capital improvements to expand the county's Brooklyn Park Transfer Station to manage more organic materials and remove contaminants.
- Advocated for state bonding for anaerobic digestion to meet long-term organics processing capacity needs.
- Worked with the county's transportation department and other partners to use more compost in county projects, including in the Penn Avenue and Webber 44 projects in Minneapolis..
- Provided more education on the need to reduce contamination in organics recycling and enforced stricter contamination standards for organics loads delivered to the county's Brooklyn Park Transfer Station.



Hennepin County commissioners and staff host state legislators on a bonding tour of the county's proposed anaerobic digestion site in Brooklyn Park.



Hennepin County continues to educate residents and businesses on the importance of reducing contamination, or materials that cannot be composted, in organics recycling. This helps ensure compost sites can produce clean, nutrient-rich compost that people want to purchase and use.

Proposed anaerobic digestion facility would turn food scraps into clean energy and back into healthy food

In 2021, Hennepin County moved forward a proposal to build an anaerobic digester, also called an AD facility, adjacent to the county's Brooklyn Park Transfer Station. The county released a Request for Proposals in June and received proposals in December.

The facility would turn food scraps and other organic materials into clean energy and compost to grow healthy food. This would add critically needed regional capacity to recycle organics, create environmental education and green job opportunities, and help advance our healthy community, zero waste, and climate action goals. Developing organics recycling infrastructure by advancing anaerobic digestion is a foundational strategy in the county's Climate Action Plan.

About anaerobic digestion and the county's proposed vision for an Eco Center

Anaerobic digestion is a proven technology that transforms organics into renewable energy and nutrient-rich agricultural and soil products.

Organic waste collected from homes, schools, and businesses would be brought to the facility, shredded, and loaded into a digestion tank. In the tanks, microorganisms would work to break the materials into two products:

- Biogas, which can replace fossil fuels for heating or be converted into a vehicle fuel that has the lowest carbon footprint of any vehicle fuel.
- Digestate, which is separated into liquids that can be used to replace fossil-fuel-based fertilizers and solids that become a nutrient-rich compost to help plants grow.

To maximize community benefits, the county's proposed vision for this site includes an Eco Center that would provide educational experiences, house a green jobs learning center, include an on-site urban farm and greenhouses, and deliver healthy food to hunger relief partners.

Throughout 2021, the county sought state funding and community support to make this vision a reality.



Food waste prevention

Both residents and businesses play a significant role in preventing and reducing food waste in our communities. Food waste prevention actions can significantly reduce waste, address food insecurity, and be a powerful climate change solution.

To prevent food waste, the county has conducted research to better understand food waste behaviors and motivations, started an audit to identify gaps in the food donation system, supported organizations who rescue food to distribute to people in need, and engaged residents in reducing food waste.

2021 results

- Provided \$100,000 to Second Harvest Heartland's Minnesota Central Kitchen at the start of the pandemic. Minnesota Central Kitchen rescued 210,306 pounds of food in Hennepin County, producing 187,650 meals for those in need, prioritizing communities of color. This innovative program, launched in March 2020, used under-utilized restaurant kitchens to feed those in need and keep restaurant workers employed during the pandemic.
- Gave grants to six aid organizations totaling over \$170,000 to purchase equipment to expand their capacity to rescue and distribute food and reduce waste.
- Conducted focus groups with 30 residents and distributed a survey that gathered responses from 1,829 residents on food waste prevention. This research will inform the development of a broad consumer education campaign in 2023.

- Hosted a second one-month online Stop Food Waste Challenge for Hennepin County residents. The 164 participants completed almost 1,200 actions. Among 40 actions to choose from, many participants tracked their wasted food, created weekly meal plans, kept food inventories, and spent over 1,700 minutes learning about food waste. All of their actions saved up to 1,200 pounds of carbon dioxide and prevented nearly 700 pounds of food waste prevented.
- Created free food waste prevention resources to encourage food recovery at schools.
- Continued to educate residents on the importance of food waste prevention through the Zero Waste Challenge and Master Recycler/Composter programs and connected Master Recycler/Composter volunteers to food rescue opportunities.
- Started a food donation/food rescue audit to identify gaps and opportunities in the food donation system.
- Worked with the Natural Resources Defense Council to test a training for health inspectors on wasted food and food donation.

Teach your kids to love food instead of wasting it.



Get tips and resources for involving your kids in the kitchen.
Join the Stop Food Waste Challenge
hennepinfoodwaste.ecochallenge.org



Insights from Hennepin County's food waste research studies

Hennepin County conducted two research studies in 2021 – in-depth focus groups and an online survey – to gain insights into why food goes to waste, what motivates people to waste less food, and what messages and resources would be effective in helping people take action. Below are the key findings from the research. The county will use these findings to create food waste reduction resources and improve the Stop Food Waste Challenge in 2022 and develop a food waste reduction campaign in 2023.

Reasons for wasted food

The most common foods that go to waste are produce and leftovers. Dairy and bread are other common food waste items. The top reasons for food being wasted at home include:

- Food, especially produce, spoils quickly.
- Want to make sure the food being eaten is safe and don't want to eat food beyond the best by or sell by dates.
- Practice poor shopping habits, including not making a grocery list, buying food without a plan to use it, impulse buying, being persuaded by sales, and buying too much of an item.
- Cook too much and forget about or don't eat the leftovers.
- Forget about food that needs to be eaten.
- Food in the freezer gets ruined, either because it's in there too long or it's not frozen correctly.
- Not valuing food because it's easy to get more.
- Pandemic has led to more cooking and more wasted food at home.

Awareness and motivations

People are generally unaware of food waste facts and the scale of the issue. Once made aware, they become much more concerned and are motivated to act on a both a personal and collective level. The top motivations to reduce food waste are:

- Stop wasting money on wasted food.
- Have a positive impact on the environment, address climate change, and leave a healthy environment for future generations.
- Avoid wasting the resources and labor that goes into growing and transporting food.
- Avoid being wasteful when there are people who don't have enough to eat.

Messaging and campaign recommendations

Recommendations for engaging the public in reducing food waste include:

- Focus on reaching people at different life stages, such as families, single people, older adults, and younger adults.
- Support people in making changes at four different behavior phases: planning, shopping, cooking, and storage.
- Develop messages that are simple, clear, quick to read, positive, visual, and inclusive.
- Reach consumers at teachable moments where food-related decisions are made, such as at the grocery store and in the kitchen.
- Emphasize money savings as a key motivator.
- Share impactful, eye-opening facts and stats about the food waste issue.
- Provide resources and easy, everyday tips for priority actions, including keeping a food inventory, meal planning, cooking with food scraps and leftovers, and proper food storage.
- Reach people frequently with actionable ideas, tips, resources, and reminders through social media, influencers, traditional and new media, and through key partners such as grocery stores and cooking websites.

Organics recycling requirements

On November 27, 2018, the Hennepin County Board of Commissioners approved revisions to the county's recycling ordinance (ordinance 13).

These changes required businesses that generate large quantities of food waste to implement food waste recycling by January 1, 2020. Cities are required to provide residents access to curbside organics recycling service by 2022.

2021 results

- Provided a variety of assistance to cities to support the rollout of organics programs, including:
 - Technical assistance on organics RFPs and contracts
 - Media kits with social media posts, sample newsletter articles, images, and graphics
 - Design and printing of promotional and educational materials including mailers, flyers, brochures, services guides, and utility bill inserts
 - Peer networking meetings for cities focused on the logistics of curbside organics recycling services and drop-off sites
 - Discussions with haulers, compost sites, and cities about implementation
 - \$1.8 million in grants for city organics programs
- Continued to experience delays in the implementation of the business food waste recycling requirements due to the COVID-19 pandemic. Disruptions to the hospitality industry and staffing issues contributed to delays in outreach, education, and compliance.



Hennepin County provides free resources, including graphics, articles, images, posts, and flyers, for cities to use to educate residents about organics recycling.

Waste prevention and reuse

Hennepin County offers several programs, such as the Join the Circle and Choose to Reuse campaign, monthly Fix-It Clinics, and Zero Waste Challenges, to encourage waste reduction and reuse. To reach its waste reduction goals, the county also targets specific materials that represent the largest percentage of reusable goods found in the trash, including food waste, wood, textiles, furniture, and household goods.

Choose to Reuse

Hennepin County encourages residents to support local reuse, rental, and repair retailers through the Choose to Reuse program, which includes the online Choose to Reuse Directory and support for reuse retailers.

Residents' buying choices and where they shop can protect the environment and support the local economy. The program aims to increase awareness of buying used goods and ultimately drive residents to purchase from their local reuse retailers. The resale business sector is strong and continuing to grow, but many local shops are competing with e-commerce marketplaces. Because of this, they recognize the power of partnering within their community to grow their local businesses.

2021 results:

- Partnered with 29 local reuse retailers. Participating retailers get access to exclusive training, resources, content, and networking related to merchandising, marketing, social media, and operations.
- Collaborated with the University of Minnesota College of Design through a Hennepin-University Partnership project focused on how to entice more retailers to participate in the Choose to Reuse program.

- Published 17 articles on buying used and living a low-waste lifestyle. Content highlights included a Love Local campaign that encouraged residents to support local businesses and a focus on reusing building materials, include a salvage and reuse showcase that aimed to inspire others to pursue projects with reused home furnishings and building materials.
- Connected more than 65,000 visitors to the Choose to Reuse website, a 62% increased from 2020.

College of Design students develop strategies for Choose to Reuse

University of Minnesota students evaluated the Choose to Reuse program using their perspective as a consumer as well as the expertise learned at the College of Design to make recommendations on how the program can better serve reuse retailers in Hennepin County.

Suggestions from the students included increasing social media impact, hosting special events, and sharing better messaging with retailers and residents alike.



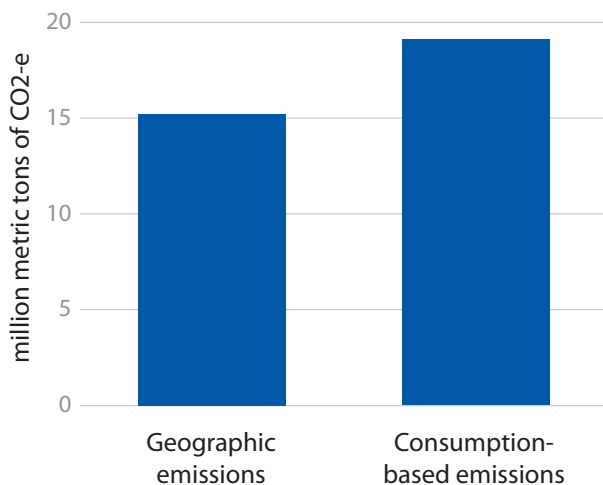
Hennepin County consumption-based emissions inventory shows the climate impact of the things we buy

We consume a lot of stuff, but the climate impacts of consumption are mostly invisible to the consumer. We all have a responsibility to consider the entire life cycle of the things we buy – from buying it to using it to throwing it away. The county conducted a consumption-based emissions inventory (CBEI) to better understand the contribution of consumption to climate change.

The CBEI sought to answer the following questions:

- What is the climate impact of the goods and services we consume?
- What is the impact of all the stuff we import?
- From production to disposal, where in the life cycle of a product do the most emissions occur?
- What categories of goods and services are responsible for the most emissions?

Greenhouse gas emission in Hennepin County
traditional geographic emissions inventory and
consumption-based inventory



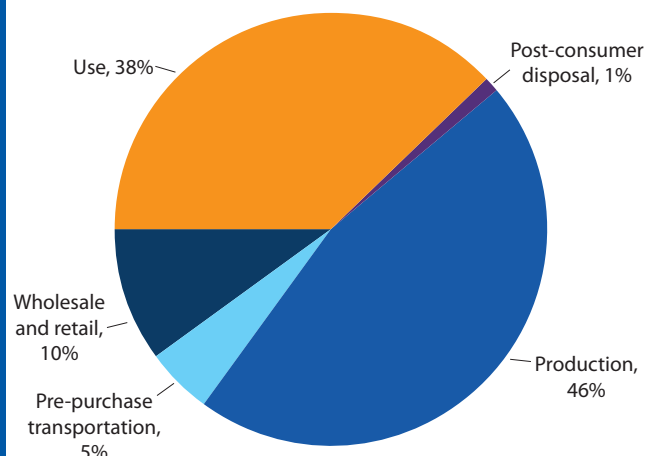
Findings

The CBEI estimates the greenhouse gas emissions that result from the purchase of goods and services by Hennepin County consumers. The analysis provides a different perspective and more information than a traditional greenhouse gas inventory, which only accounts for emissions generated within the county from energy use, transportation, and waste.

The following are key findings from the CBEI:

- Most of the climate impacts of a product happen before it becomes waste. The production phase of a product's life cycle accounts for 46% of all emissions.
- Our emissions are 25% higher if we account for the emissions of things brought into the county.
- Government is responsible for the most emissions associated with construction. This is mostly due to governments procuring cement, primarily for roads and bridge.
- To have the biggest impact on reducing emissions, we should focus on the following goods and services: transportation, buildings and infrastructure, appliances and electronics, food, and clothing and textiles.

Emissions by life-cycle phase

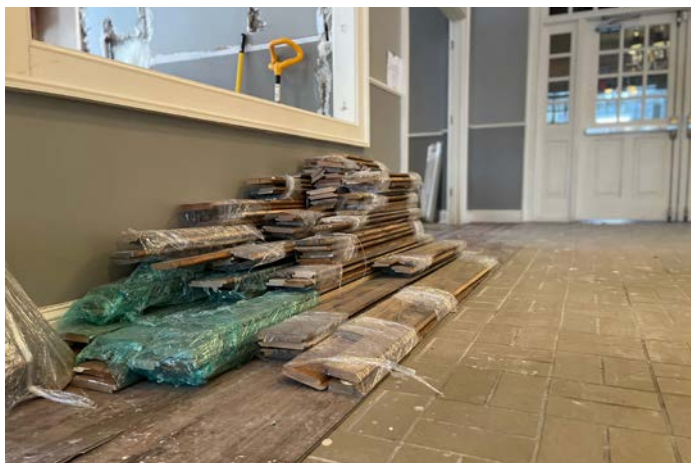


Deconstruction and pre-demolition inspections

About 70% of construction and demolition waste ends up in landfills. Although some materials are separated for recycling at waste transfer stations and landfills, many additional materials have the potential to be salvaged, reused, or recycled. Deconstruction, which involves carefully dismantling buildings to salvage materials for reuse, provides an opportunity to divert up to 85% of construction and demolition waste from landfills. It also provides numerous environmental and social benefits compared to mechanical demolition.

Hennepin County continues to promote deconstruction through the deconstruction grant program. The program aims to make deconstruction a more affordable option by offering up to \$5,000 to homeowners and developers.

Hennepin County also continued pre-demolition inspections of buildings prior to demolition to ensure hazardous materials, such as asbestos and items containing mercury or lead, are managed properly. Managing these types of hazardous wastes properly is important for protecting public health and the environment and is required by law.



2021 results:

- Awarded 10 deconstruction grants to property owners totaling over \$43,000. From the seven projects completed in 2021 (three projects are wrapping up in 2022), 234 tons of building material were salvaged for reuse and 148 tons were recycled, totaling over 382 tons of building material diverted from landfills.
- Recognized as the Deconstructor of the Year from Build Reuse, the leading national organization on deconstruction, for the county's work to promote deconstruction through the grant program.
- Continued to support Better Futures Minnesota, an organization that specializes in deconstruction techniques, runs a used building material store, and provides job training to individuals who face barriers to employment due to past incarceration, by contracting with the organization to fully deconstruct three buildings and partially deconstruct 10 buildings within the county. These projects diverted over 85 tons of building material for reuse and funded over 550 hours of on-the-job training for Better Futures crew members.
- Provided education and outreach on reusing and recycling building materials to residents, contractors, and other partners through six webinar and conference presentations, a feature on the City of Edina TV network, and a new deconstruction video on the county's website.
- Continued to develop an internal construction and demolition waste policy to increase reuse and recycling of building materials on county-owned projects.
- Conducted 127 pre-demolition inspections to ensure proper management of hazardous materials prior to demolition. County staff worked with 66 different contractors to coordinate inspections and follow-up. 72 inspections were in person and 55 were document only, which was offered as an alternative in response to COVID-19.

Project highlight: Restoring the historic Ard Godfrey House



Hennepin County helped with the restoration of the historic Ard Godfrey House, the oldest stick frame home in the Twin Cities built in 1848.

The house has undergone several refurbishing projects over the years, including a few structural moves before finding its current home in Chute Square on the corner of University Ave and Central Ave SE in Minneapolis. Recently, Hennepin County helped with replacing sections of damaged exterior siding around the building.

The project provided opportunities for job skills training, relied on unique community partnerships to preserve the home's historic character, and prioritized the use of salvaged building materials.

A few project highlights:

- Carpentry apprentices in Hennepin County's Productive Day program replaced the siding.
- Bauer Brothers Salvage, a building material reuse warehouse in north Minneapolis, provided old growth Douglas Fir beams for the replacement siding.
- MPLS MAKE, a member-based community woodshop in Columbia Heights, used their sawmill to transform the old growth beams into usable siding of specific sizes for the restoration.



Fix-It Clinics

Hennepin County Fix-It Clinics provide free, hands-on assistance from knowledgeable volunteers to disassemble, troubleshoot, and repair household items. In 2020, the program pivoted to a virtual option in which volunteers helped residents repair their items at home.

2021 results

- Continued to teach valuable repair skills and build community by virtually connecting Fix-It Clinic volunteers to those in need of repair assistance. 14 volunteers donated 174 hours fixing 80 items.

"Very, very appreciative of the Fix-It Clinics – I loved the in-person events, it was always a favorite thing to look forward to... and now I'm so glad it still can keep going virtually as an option until it makes sense to hold in-person again."

– Minneapolis resident

Waste prevention at schools and businesses

The county provides waste-prevention focused funding, technical assistance, and educational resources to help schools and businesses reduce waste.

2021 results

- Designed a new business waste prevention grant for businesses. The program focuses on waste prevention initiatives, including replacing disposables with reusables, food waste prevention and innovative projects around research and development. Allocated \$269,000 to fund seven projects in the first year of the grant.
- Reserved \$50,000 of the school recycling grant funding for waste reduction projects, such as implementing food rescue efforts or replacing disposable food service items with reusable alternatives. Awarded grants totaling \$33,700 to fund items including reusable utensils and trays, dishwashers, and water bottle fillers.

Business waste prevention project highlight: Forever Ware's reusable to-go containers offer takeout without the waste

Forever Ware, a new Minneapolis-based startup, is providing restaurant goers a way to support local businesses by getting takeout while avoiding the waste of disposable containers.

Diners at participating businesses can get their takeout in reusable metal containers, which can then be returned to any participating business.

Forever Ware received a business waste prevention grant from Hennepin County to help get started.



Engaging residents through education and outreach

Hennepin County promotes environmental stewardship by raising awareness about changes in recycling programs, generating excitement about waste reduction, and partnering with organizations in the community to motivate behavior change.

Zero Waste Challenge



The Zero Waste Challenge launched in 2016 to help participants live lower-waste lifestyles. The program now includes the original eight-month personalized challenge for households as well as the online Plastic-Free Challenge and Stop Food Waste Challenge.

These challenges continue to successfully help residents learn about their waste and consumption habits, identify the most effective actions for their household to take, reduce the amount of waste they generate, and motivate others to take action.

2021 results

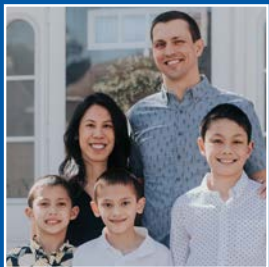
- Provided individualized support to 44 households in the intensive version of the challenge, which wrapped up in May 2021. Coaching was provided by staff liaisons and Master Recycler/Composter volunteers, an opportunity that worked well for both the volunteers and the households. Participating households attended an intro training and at least four monthly workshops. They also tracked their waste generation three times over the course of eight months. New options for tracking waste were offered to the

2021 cohort, including making volume estimates and writing journals. The households that chose to weigh their waste achieved an almost 25% reduction in waste generation over the course of the challenge, which is only slightly lower than pre-Covid results.

- Held three month-long online challenges, engaging nearly 1,000 total participants who completed over 5,000 waste-prevention actions and spent over 8,500 minutes learning about waste topics during the challenges. Some challenge highlights:
 - Participants had the new option of creating or joining a team with friends, family or coworkers. This allowed for friendly competition, motivation, and troubleshooting. In total, 270 teams were created.
 - The general Zero Waste Challenge had 210 participants who completed 1,018 actions, avoiding 828 pounds of carbon dioxide emissions and composting almost 800 pounds of waste.
 - The Stop Food Waste Challenge had 164 participants who completed 1,174 actions, avoiding 1,210 pounds of carbon dioxide emissions and preventing almost 700 pounds of food waste. The Stop Food Waste challenge partnered with Cooking Matters, a program of University of Minnesota Extension, to host four virtual cooking workshops.
 - The Plastic-Free Challenge, offered for the first time in 2021, had 615 participants who completed 3,030 actions. These actions resulted in more than 900 pounds of packaging waste avoided, over 600 plastic items, such as bottles, containers, utensils, and straws, not used, more than 5,000 minutes spent learning, and 1,800 pounds of carbon dioxide not emitted.

Zero Waste Challenge participants share the program's impact

Promotions for the 2021 – 2022 eight-month Zero Waste Challenge, in which participating households get personalized coaching from a waste reduction specialist, shared testimonials from past participants. Here's what some of the past participants had to say about the impact of the challenge:

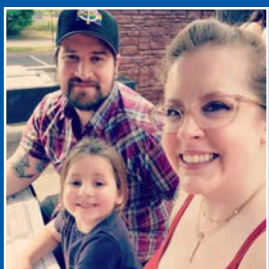


"The Hennepin County Zero Waste Challenge was truly life changing for our family. It made us take an in depth look at our consumption and waste habits and equipped

us with tools and strategies to become better stewards of the environment." – Carolyn Wieland from Eden Prairie



"I learned a lot. I appreciated the help along the way and great ideas to reduce waste and become more environmentally friendly." – Gale Cannon from Brooklyn Park



"Our experience was entirely positive, and it has changed the way we bring items in and dispose of items in our lives. Our waste output has reduced drastically, and we have

been able to pass on nuggets of knowledge to friends and family who are eyeing a reduced waste lifestyle. It was a great opportunity to learn as a family, adults and child alike." – The Nolan-Eickholt family from Osseo



"We set up a compost bin that has dramatically reduced the weight and volume of our trash while getting us to think that much more about reducing our

food waste. Overall, the program helped us feel more confident about what we can and should recycle - and even better - what to reuse or repurpose!" – Mark Werley from Minnetonka



"It was important to start getting the younger generation (our son) to understand and appreciate the importance of recycling, visiting secondhand

stores, learning our city has organics drop off, putting in our own compost, visiting libraries, reusing bags at the grocery store and farmers market, and even fixing items around the house that we deemed broken." – Jenny Mikkelsen from Minnetonka



"Through the informative presentations, helpful resources, and supportive staff, we were able to implement many easy and impactful

changes to reduce our household waste. This program opened our eyes to many wasteful habits we had and has inspired us to continue to find ways to reduce our environmental impact." – Claire Zeise from Minneapolis

Master Recycler/ Composter volunteers

Master Recycler/Composter volunteers learn about waste prevention, recycling, and composting from industry experts and tours of waste processing facilities during a six-week course. They then commit to volunteering 30 hours inspiring others in their communities to reduce waste, recycle more, and compost through activities such as answering questions at events and designing and implementing waste reduction and recycling projects.

We continued to hold the Master Recycler/Composter class as well as a continuing education events for current volunteers online.

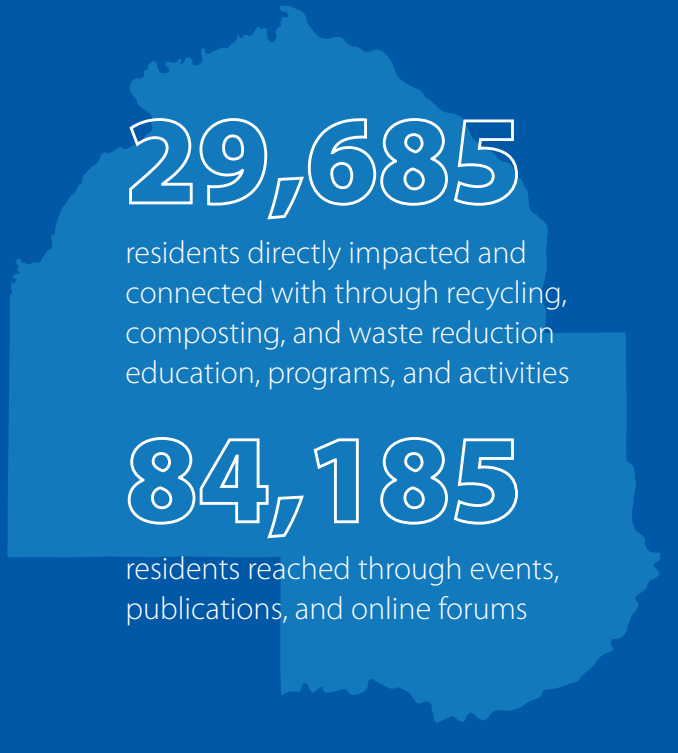
2021 results

- Added 55 new volunteers through the spring 2021 class, bringing the total number of Master Recycler/Composter volunteers (from 2011 to 2021) to 692.
- Had Master Recycler/Composter volunteers contribute 746 hours doing outreach and projects in their communities.
- Held a continuing education event for current Master Recycler/Composter volunteers focused on reducing wasted food.
- Began an evaluation of the program focused on racial equity.

Master Recycler/Composter volunteers have wide reach in their communities

Master Recycler/Composter volunteers share what they learn in their training course by conducting outreach and planning programs in their communities.

Master Recycler/Composter volunteers have broad reach and impact, including:



29,685

residents directly impacted and connected with through recycling, composting, and waste reduction education, programs, and activities

84,185

residents reached through events, publications, and online forums

Environmental education, outreach, and communication efforts

Environmental education, outreach and communication efforts engage our community and partners in developing the knowledge, skills, attitudes and motivation to work individually and collectively towards sustaining a healthy environment.

The county raises awareness about environmental issues and solutions through a wide variety of communication channels.

Through Green Partners environmental education grants, the county funds organizations to actively educate, engage, and motivate residents to become environmental stewards and make positive behavior changes. County staff continued to support grantees in shifting their project plans to comply with COVID-19 health and safety guidelines and in response to the Minneapolis teachers' strike.

The county supports a broad network of partners to empower residents to reduce waste and increase recycling by providing training and networking opportunities, resources and supplies, tours and field trip transportation, and project support.



Rusty and the Crew with Off the Blue Couch set up waste stations in people's homes as part of their Green Partners grant.

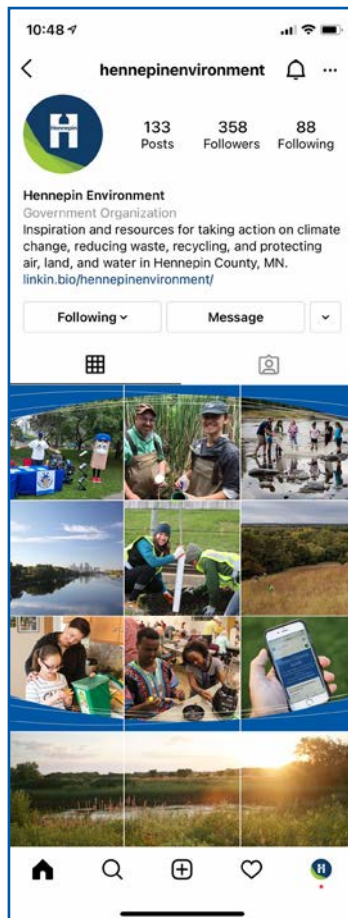
2021 results

- Awarded 22 Green Partners environmental education grants - nine for youth environmental education and 13 focused on motivating adult audiences to take environmental actions. These projects are expected to engage more than 5,700 residents in becoming environmental stewards and taking action to protect the environment and reach more than 100,000 residents with environmental messages. Of the 22 projects, 15 are engaging Black, Asian American Pacific Islander, and other communities of color and 15 are incorporating solid waste topics.
- Continued to support the 20 organizations that were awarded grants in 2020 and wrapped up in August 2021. These grantees engaged more than 2,000 youth in environmental education and green jobs and 1,700 primarily adult participants in taking environmental actions. Environmental messages were shared with more than 82,000 residents through grantee networks.
- Supported our environmental education network, which is open to anyone working to engage their community in learning about and taking action to protect the environment, by hosting three virtual network meetings with more than 100 total attendees and launching the Hennepin County environmental education network Facebook group that has grown to 137 members.



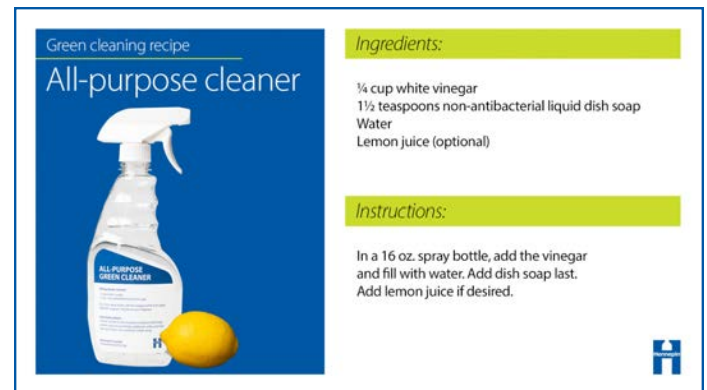
- Adopted a resolution for Earth Day 2021 recognizing that environmental education, community engagement, and partnerships are critical to meeting the county's goals and fulfilling its mission.

- Launched an Instagram presence to provide inspiration and resources for taking action on climate change, reducing waste, recycling, and protecting air, land, and water. Grew to 358 Instagram followers by the end of 2021, in addition to 10,000 followers on Facebook and 1,900 followers on Twitter.



- Sent 152 digital newsletter editions to over 43,000 total subscribers covering topics such as recycling, waste prevention, zero-waste initiatives, hazardous waste disposal, grant programs, and more.
- Promoted the Green Disposal Guide, an online guide to help residents find information on the best way to recycle, reuse, or dispose of household items. The guide was visited by 222,312 unique visitors.

- Promoted waste prevention, recycling, proper disposal, and health and safety practices by providing tips and resources on the following topics:



- Green cleaning with new recipe cards that help people protect their health, use less-toxic ingredients, and reduce packaging waste
 - Battery recycling with the Be a Battery Hero campaign
 - Spring cleaning and making a trip to the drop-off facility
 - Properly disposing of household hazardous waste at community collection events and drop-off facilities
 - Avoiding plastics in conjunction with the Plastic-Free Challenge and reducing food waste in conjunction with the Stop Food Waste Challenge
 - Decluttering, making a donation a priority, thrifting tips, green remodeling, and giving reused gifts in conjunction with Choose to Reuse
 - Safely disposing of unused and unwanted medicines
 - Reducing, recycling, and disposing of common waste around the holidays
 - Setting up recycling and organics recycling in rental homes through videos and social media promotions
- Reopened order forms for recycling and environmental education resources for residents, businesses, schools, and multifamily properties. Fulfilled over 480 orders for more than 30,000 items.

Serving residents where they are

At home

Recycling, organics, and trash service depends on where you live. Cities provide recycling service to most houses and smaller multifamily buildings (those with two to eight units). This service is commonly referred to as single-family curbside recycling. Larger, multi-unit residential buildings have waste services provided by the property owner or manager.

City recycling programs

Cities play an important role in the solid waste management system, collecting nearly 100,000 tons of recyclable materials from 372,800 households in 2021.

Hennepin County provides funding to support city recycling programs and assists with educational efforts and contracting. The county also participates on regional and statewide teams to improve consistency in recycling programs and education.



2021 results

- Awarded \$1.82 million in SCORE funding to cities to support their recycling programs. To receive a grant, cities were required to meet the terms of the county's residential funding policy.
- Assisted cities with promotional efforts and sending recycling guides to residents to increase consistent use of terminology and recycling messages.
- Continued to participate in the Recycling Education Committee, a statewide group formed by the MPCA to support the development of better recycling education and outreach. Representatives from the recycling industry, local government, and other organizations met regularly to build consensus on what is universally accepted, coordinate consistent messaging to the public, and improve communication.
- Provided technical assistance to cities on recycling RFPs and contracts. City recycling contracts allow cities to communicate consistent educational messages, provide a variety of resources, and deliver the best overall price for service.

Updated residential recycling funding policy prioritizes organics recycling and focuses on reducing disparities

Hennepin County's 2022 – 2025 Residential Waste Reduction and Recycling Funding Policy, which guides how the county allocates funding to support city waste reduction and recycling programs, was approved in October 2021.

The policy prioritizes support for organics recycling programs and focuses on reducing disparities and increasing access by allocating funding to multifamily recycling programs and organics recycling drop-off programs.

About the policy

Each year, Hennepin County receives funding from the State of Minnesota's Select Committee on Recycling and the Environment (SCORE) and passes all of that funding on to cities to support their waste reduction and recycling programs. The Residential Waste Reduction and Recycling Funding Policy guides how that funding is distributed and outlines requirements for cities.

Engagement that informed the development of the policy

To develop the policy, county staff met with city recycling coordinators to gather feedback, address questions and concerns, understand limitations, and gain insights about residents' experiences with recycling programs. The county also surveyed city communication staff to inform the education requirements.

Staff used the county's Racial Equity Impact Tool (REIT) to ensure changes to the funding policy aligned with county disparity reduction goals. The application of this tool revealed that residents of single-family homes benefit from the funding distribution, while residents of multifamily properties have less equitable access.

The feedback and analysis led to two major changes: more up-front funding to help grow organics recycling programs and more resources allocated to support waste reduction and recycling programs in multifamily settings.

Multifamily recycling

Hennepin County revised its recycling ordinance in 2018 to include new recycling requirements for multifamily properties. Property owners and associations are required to provide adequate recycling service and ensure residents have annual recycling information and easy access to recycle. The county offers resources to improve recycling at multifamily properties, including grants, educational materials, container labels, and staff assistance.

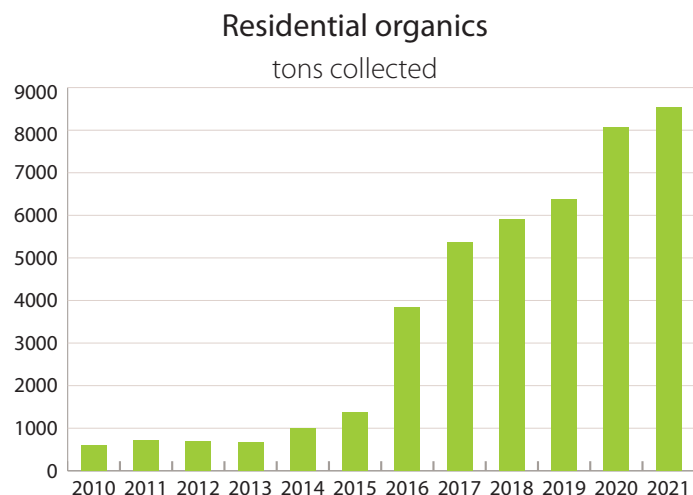
2021 results

- Provided support to improve recycling for more than 12,000 units at 45 properties.
- Awarded free recycling bins to eight multifamily properties through the business recycling grants to start or improve recycling or organics recycling.
- Offered virtual programming to multifamily properties through online presentations and support during the continuing pandemic.

City organics recycling programs

The county and cities are focused on offering more organics recycling opportunities and increasing participation in organics recycling programs. Cities offer different ways to participate in organics recycling, including through citywide programs, through specific haulers, and with drop-offs.

Organics recycling availability, participation, and amount collected have been gradually increasing over the last decade. Currently, more than 80,000 households, or 23% of households in the county, participate in city organics recycling programs. All cities in the county are required to make organics recycling service available to households with curbside recycling service by 2022.



2021 results

- Awarded \$1.82 million in SCORE funding to 32 cities for the purpose of increasing organics diversion. Cities used the funding in a variety of ways, including to promote their programs, increase educational efforts, offset the cost of service, and provide supplies such as compostable bags and kitchen pails to participants. The county allocated 50% of SCORE funding to organics recycling in 2021.
- Supported cities in the launch and expansion of organics recycling programs. Participation in organics rose by 6% from 76,029 households in 2020 to 80,550 households in 2021.
- Assisted cities with promotional efforts and sending recycling and organics recycling guides to residents. Cities used county terminology and images and provided messages through a variety of channels including direct mail, newsletters, websites, social media, and events.
- Provided technical assistance on organics RFPs and contracts to support cities in meeting the requirement to establish organics programs before January 1, 2022. City recycling contracts allow cities to communicate consistent educational messages, provide a variety of resources, and deliver the best overall price for service.

Program launch highlight: Richfield offers citywide organics recycling service



Richfield launched their curbside organics program in October 2021, as part of organizing all solid waste services in the city. Organics recycling was offered to all city solid waste and recycling services customers, but residents had to opt in to the service.

Hennepin County partnered with city staff to develop and distribute a program services guide, which provided updates on changes to all solid waste and recycling services and helped launch the organics recycling program, to all impacted residents.

The organics program saw immediate interest and success, reaching a 23% participation rate in under three months. This far exceeded the city's expectations for initial signups!

Organics drop-off sites

Organics drop-off sites increase access to organics recycling for all residents, especially those living in multifamily properties without access to city recycling service or those in cities that don't offer the service. Drop-offs also raise awareness about what organics recycling is, why it is important, and how to get started.

2021 results

- Awarded organics drop-off grants totaling \$47,200 to three cities to establish a total of seven new organics recycling drop-off sites over two years. Grants were awarded to:
 - City of Crystal/Hennepin Recycling Group for one site
 - City of Minnetrista for one site
 - City of Minneapolis for five sites; three sites opened in fall 2021 located in Holmes Park, Elliot Park and Towerside Park neighborhoods.
- Increased the number of organics recycling drop-off sites in the county to 38. This includes organics recycling drop-off sites at the county's Bloomington and Brooklyn Park drop-off facilities.

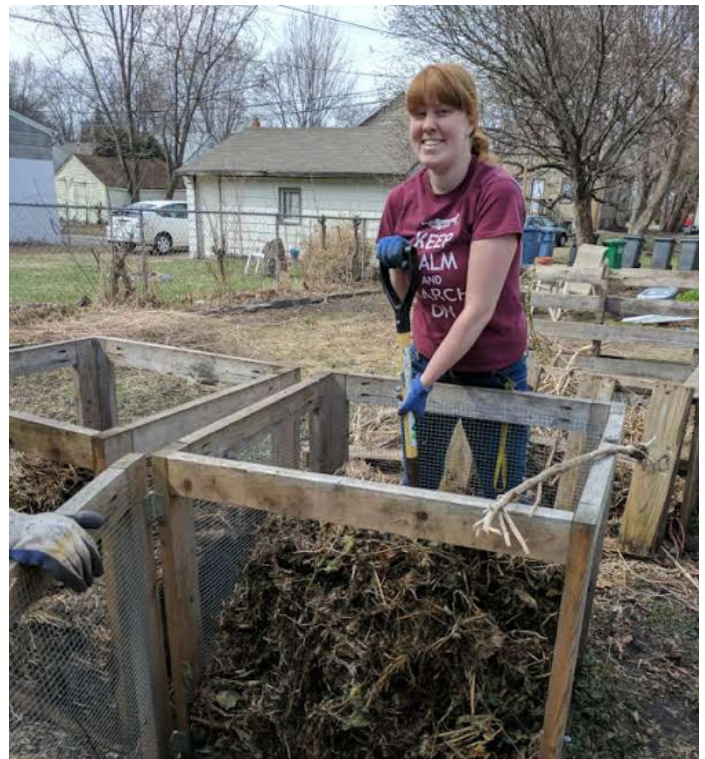


Backyard composting

The Environment and Energy department partners with Hennepin County Productive Day Program to build compost bins from cedar and wire mesh. To increase backyard composting, the county sells the compost bins at a discounted rate at the drop-off facilities. The county also offers online composting webinars to help residents learn how to compost.

2021 results:

- Started selling compost bins at the Hennepin County drop-off facility in Bloomington to better serve residents in the southern part of the county. Sold a total of 128 compost bins at the drop-off facilities in Bloomington and Brooklyn Park.
- Hosted four online backyard composting workshops that provided training and education to more than 30 residents.



At work

Hennepin County offers technical assistance, grants, and educational materials to help businesses start or improve recycling or prevent waste.

Hennepin County has provided grants since 2013 as well as technical assistance and educational materials to businesses and nonprofit organizations. Businesses that have received grants have increased the amount of materials they divert from the trash.

2021 results:

- Redesigned the business recycling grant program to focus on small businesses by targeting businesses with an annual revenue of no more than \$1 million. All nonprofit organizations continue to be eligible.
- Awarded free recycling bins to 26 recipients, including small businesses, nonprofit organization, and multifamily properties through business recycling grants to start or improve recycling or organics recycling.
- Fulfilled 146 orders for more than 19,500 posters and labels for recycling, organics recycling and trash containers.
- Launched business waste prevention grants and budgeted funding to offer \$300,000 in grants in 2022.



At school

Nearly 80% of school waste is recyclable or compostable. To help schools reduce waste and increase recycling and organics recycling, the county provides grants and technical assistance, distributes educational resources and signage, offers classroom presentations, and holds bi-monthly school recycling meetings.

2021 results

- Awarded \$105,000 in grants to 10 schools to reduce waste or start or improve recycling and organics recycling programs.
- Started an evaluation of the school recycling grant program. Findings and recommended changes will be available in 2022.
- Delivered 120 cubic yards of free compost in partnership with the Mulch Store to 36 schools to close the loop on organics recycling.
- Held five school recycling meetings for school staff and volunteers to learn about waste management best practices and sustainability. The meetings were held virtually, which allowed school staff to attend who may not have been able to before.
- Solicited proposal for a contractor to give educational performances on recycling and waste to elementary audiences.

At events and on the go

The county partners with the cities of Brooklyn Park and Hopkins to make portable recycling and organics containers available for events throughout the county. In 2021, with events still limited due to the COVID-19 pandemic, the containers were used at four events with approximately 2,360 attendees.

Promoting drop-offs for hazardous waste and additional recyclables

Drop-off facilities and events



Many items that aren't accepted in residential recycling programs can still be recycled through drop-offs. There are also items that contain hazardous materials that must be kept out of the trash because they can harm our health or the environment.

To ensure proper disposal of hazardous items, the county operates permanent drop-off facilities in Bloomington and Brooklyn Park for residents to bring appliances, electronics, excess recycling, and household hazardous wastes.

After a year of limited operations to follow COVID-19 health and safety guidelines, the Hennepin County drop-off facilities in Bloomington and Brooklyn Park resumed more normal operations, including once again accepting large items like appliances and TVs for recycling. Additional disposal services, including medicine drop boxes and household hazardous waste collection events, resumed operating at a normal capacity, helping to ensure broad access to hazardous waste and problem material disposal options.

In addition to disposal services for residents, operations continued without pause at the Brooklyn Park Transfer Station and the Hennepin Energy Recovery Center. These facilities are vital in keeping the solid waste system operational.

2021 results

- Served more than 144,000 residents and collected over 8 million pounds of household hazardous waste and problem materials at county drop-off facilities and collection events.
- Held six household hazardous waste collection events. The six events, each held over two days, had over 5,600 residents dropping off over 276,000 pounds of waste, or 49 pounds per participant.
- Collected almost 1.25 million pounds of cardboard, a 17% increase compared to 2020 and 27% increase compared to 2019.
- Fielded more than 19,500 calls from residents. Call center staff spent more than 600 hours responding to resident questions.

2021 household hazardous waste collection event results



6
collection events



276,000
pounds of HHW collected



5,608
participating households



49
pounds collected per household



9,346
pounds of batteries collected

Mattress recycling

Hennepin County and Second Chance Recycling have partnered on recycling and environmental services since the early 1980s. Second Chance is a Minneapolis-based nonprofit run by EMERGE that provides transitional employment opportunities for people with barriers to employment.

Recycling options for mattresses were limited due to COVID-19 restrictions. The Hennepin County drop-off facility in Brooklyn Park resumed collection of mattresses in summer 2021. Pickup service remained available through Second Chance Recycling in Minneapolis and in the eastern part of the county.

2021 results

- Collected 1,638 mattresses and box springs, including 494 from apartments and condos and 1,008 from single-family homes.
- Collected 4,223 mattresses and box springs from residents at the Brooklyn Park Transfer Station.



Medicine

After a year of closures due to COVID-19 and civil unrest, medicine collection rebounded and was up 23% from 2020. No medicine collection events at senior living facilities were hosted to keep residents and county staff safe. Instead, medicine mail-back envelopes were distributed to senior living facilities in high overdose areas.

2021 results

- Promoted medicine disposal options at 65 medicine drop boxes – 23 of the boxes are operated in partnership with the county and 42 are operated by independent pharmacies.
- Collected nearly 16,000 pounds of medicine at drop boxes operated in partnership with the county.
- Distributed over 500 mail-back envelopes to senior living facilities in high overdose areas.

Paint

Paint is one of the most common materials brought to the Hennepin County drop-off facilities or collection events for recycling.

2021 results

- Collected nearly 1.7 million pounds of paint at county drop-off facilities and events.
- Promoted availability of paint disposal at 39 independent sites that partner with PaintCare, including hardware stores and paint stores. These independent sites collected 679,367 pounds of paint.
- Received \$619,000 from PaintCare for costs related to paint disposal.

Recovering resources from the trash

Waste-to-energy



Despite the focus on diverting materials from the trash through waste reduction, reuse, recycling, and organics recycling, residents and businesses put almost 812,498 tons of stuff in the trash in 2021. This amounts to nearly 1,300 pounds per person. There are two options for managing waste that remains after recycling: burning it to recover resources or burying it in a landfill.

Hennepin County operates the Hennepin Energy Recovery Center (HERC), a waste-to-energy facility in downtown Minneapolis. Processing waste to generate energy is environmentally preferable to landfilling, and climate experts recognize waste-to-energy's potential as a transitional solution because it:

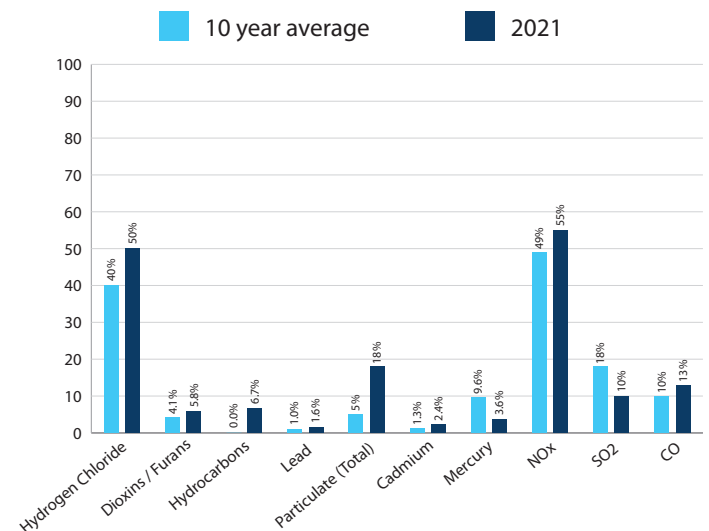
- Reduces methane emissions by keeping waste out of landfills.
- Recovers scrap metal – more than twice the amount of metal collected in city curbside programs is recovered and recycled from the waste stream at HERC every year. Recycling steel requires 60% less energy than producing steel from iron ore.
- Creates baseload electricity and steam that might otherwise be sourced from coal or gas-fired power plants. HERC produces enough electricity to power 25,000 homes and provides steam to the downtown Minneapolis district energy system and Target Field.
- Processes waste close to where it is produced, minimizing the transportation of waste and associated truck emissions.

The county expects waste-to-energy to decline in importance as waste prevention, reuse, recycling and composting become more widely adopted. However, residents and businesses still create a lot of trash, and we need to manage it responsibly. HERC makes environmental sense until we have successfully diverted most organic materials, including food waste, paper and wood, from the trash. Until then, HERC operates with stringent safety standards and meets all air permit requirements.

2021 results

- Recovered 15,874 tons of metal for recycling.
- Met state law to process trash before landfilling with 361,574 tons of trash delivered to HERC.
- Cleaned and treated air emissions at HERC to remain well below MPCA permitted levels.

HERC emissions as a percent of MPCA permit limit



Landfills



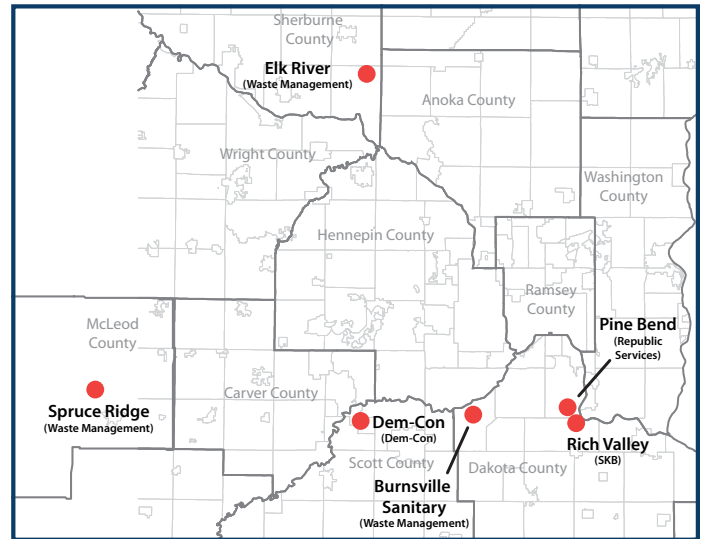
State law requires that no new landfill capacity be permitted without a Certificate of Need (CON) issued by the Minnesota Pollution Control Agency (MPCA) indicating that the additional landfill capacity is needed. The MPCA must certify that there are no feasible and prudent alternatives to landfilling.

In late 2019, the Great River Energy Resource Recovery Facility in Elk River closed. This facility represented one-third of the waste-to-energy capacity in the seven-county metro area. Consequently, metro-area waste-to-energy facilities operated at full capacity in the first quarter of 2020, and a substantial amount of waste previously managed by the Elk River waste-to-energy facility was instead sent to landfills.

In 2021, to ensure the continued safe and proper management of waste materials, the MPCA determined that it would be necessary to expand landfill capacity to manage the waste being generated. MPCA analysis determined that over the next seven years, approximately 6 million tons of trash from the metro area will need to be disposed of in a landfill.

With fewer waste-to-energy facilities available and high financial and environmental costs associated with hauling trash to a non-metro facility, the MPCA has decided that additional metro-area landfill capacity is prudent and necessary. If landfills are not allowed to expand, Twin Cities residents could end up with no facility to send their waste.

Landfills seeking expansion



Source: Minnesota Pollution Control Agency (MPCA)

Sending waste to landfills is the least preferred way to manage trash because of their significant costs and risks. Burying trash in the ground presents long-term risks to groundwater, and cleaning up old, leaking landfills costs hundreds of millions of dollars. Additionally, the value of materials dumped in landfills is lost forever. Landfills also emit methane and other potent greenhouse gases at much higher rates than recycling, composting, or waste-to-energy.

In order to reduce the need for future landfill capacity, we need to work now to implement policies, increase resources, and make different decisions at our businesses, public institutions, and homes related to the waste we create.

